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To Whom It May Concern:

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As a WISP I feel I need to address some of these issues from an operator's point of view.
On the issue of base station power levels. On one hand I like the idea of higher power levels, especially for rural operators. I also like the idea of smart antennas. And in more and more cases it's better system design to use sectored solutions for scalability and interference mitigation. I fear that allowing the 3 for 1 Point To Point (ptp) rule for Point To MultiPoint (PTMP) systems will A: Tilt the market in favor of those with the most money and B: Encourage massive overbuilding of systems. In either case the overall noise floor will rise, power is power no matter what direction it's pointed. If there is to be a higher level of power allowed I'd suggest that it should be based on house holds (or businesses, maybe gauged by population density data?) per square mile for x miles from the transmit site. And leave antenna technology up to the deployment requirements. IF that's not possible then I'd propose that a hard limit be set and that there be no benefit beyond using an antenna of a given pattern. ie: no benefit for using an antenna of less than 90* horizontal beamwidth.

I wholeheartedly agree that once an antenna type and gain is certified that any technically equivalent antenna should be allowed at the same or lower gain. I DO wish that antennas were held to higher standards though. Many a time we can't find the patterns. Or the patterns shown are calculated not measured. I'd like to see antenna manufacturers required to post easy to find *measured* patterns and that antennas that make it to the field be required to be at least close to what was certified.

I see some don't like the idea of marketing amps as a separate item. I'd submit that the empirical data doesn't support the concept that harmful interference is likely. People have been mixing and matching antennas and amps for years now and I still know of NO cases of harmful interference caused by a bad amp/radio configuration. I'd submit that the best way to deal with this is to allow the flexibility of changing amps or radios or antennas as

needed. But require that the radios and the amps keep their output clean. Maybe even require extra out of band filtration on amps. I can see why manufacturers may not like that idea but I certainly don't like the idea of hiring a $500+++ tower climb to swap out an amp just because I replaced an AP. No matter what the reason for the swap. As a compromise with the manufacturers I'd accept that they be allowed to issue Class 1 permissive changes for certification of amps rather than send them to a lab.

On the issue of a professional installer. From the standpoint of one that teaches others how to build WISP systems I like the idea of keeping myself as one who's able to charge for system design services. From the point of view of a WISP (I am a WISP and I help others get started as a consultant) I further like anything that keeps competition away. However, as an American I think it's a good thing to primarily let the free enterprise system do it's thing. I think that realistic rules should be put in place and that those rules should be enforced. As it stands right now, many of the rules are ignored by the masses and are not realistically enforceable. The lack of harmful interference issues speaks (I think) to the need to change the rules. The rules are overly invasive and when ignored the feared reasons for the rules are not materializing. Keeping the unique connector rule in place merely raises the cost of deployment, connectors for any radio are readily available from many sources. At the same time, I don't need any more ding bat operators in my area. Nor do I like the idea of being limited as to what components I can use on my systems. I often use BETTER antennas than what the manufacture has certified with the radios I use. Maybe adding a little bit to the HAM license would be an easy way to make sure people understand what they are doing when they build systems. Get a HAM license and be considered a "professional installer". Or maybe a "professional system designer"????

More spectrum would alleviate most of the problems we're talking about though. Our systems are so low in power they are unlikely to interfere with legacy systems. More spectrum would also allow us to cause less interference to ourselves or other unlicensed users. I'd like to submit that I think almost all spectrum should be opened up on a non interference basis. Perhaps cognitive radios will make this idea technically palatable. We could certainly use a LOT more sub 1ghz spectrum. Everything east of the Mississippi and west of the Cascades is almost impossible to service economically (financially and spectrally) with current spectrum.

I do like the idea of different rules for indoor and outdoor devices.

One last item. I've not yet figured out how to propose this so I'll do it here. The 6 GHz requirement of 6' dishes is severely limiting the potential deployment of these systems. There's little to no reason to have a 6' dish when trying to shoot a .25 mile link. I think dropping the antenna requirement and adding a requirement for auto power level controls might allow us to use smaller antennas (many towers won't support and many buildings won't allow 6' dishes) AND keep the spectrum almost limitlessly available for ptp systems. Maybe we should even go so far as to allow 6 gig systems to work as unlicensed systems on a non interference basis. Put in a 6 GHz system and get a license and you can keep everyone else from interfering with you, put in one without a license and you run the risk of having to change it out or change channels later.

Sincerely,
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